NOTE XIX.

ON SOME NEW OR IMPERFECTLY KNOWN PODOPHTHALMOUS CRUSTACEA OF THE LEYDEN MUSEUM.

BY

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1. *Atergatopsis Amoyensis* n. sp.

This species is closely allied to *Atergatopsis granulatus* Alph. M. Edw. and to *Atergatopsis Lucasii* Montr. It has the physiognomy of the former, but the *whole* surface of the carapace is uniformly covered with close minute granules, which are somewhat greater on its lateral regions than in the middle; there are also a few short stiff hairs on the carapace and on the legs. Front bilobed, formed by two rounded lobes which are very granular and separated by a rather deep incision. Interregional grooves very shallow, faintly marked. Latero-anterior margin with three small granular teeth, one on the middle, the second at the posterior edge of the margin, the third between the two other ones. The pleural lobes and the whole inflected portion of the carapace also somewhat granular, as also the two basal somites of the abdomen which is constituted by 5 segments. The chelipedes are nearly equal; the meropodites covered by the carapace; the outer surface of the carpopodites, and the outer and inferior surfaces of the penultimate joints are very granular, and the inner surface of the claws is less so. The dactylopodite is much granulated at its base, and, just as the immoveable finger, very similar to the same parts of *Atergatopsis Lucasii*, being armed only with some small teeth. The ambulatory legs are very strong, covered with hair and very rugose and granulated.

The Leyden Museum has three specimens of this crab, which have been collected by Mr. G. Schlegel at Amoy in China.

Breadth of carapace of the largest specimen	47 mm.
Length » » »	30 mm.

This species is distinguished by the uniform granulation of the carapace and the legs, by the three granulated teeth at the posterior part of the antero-lateral margin and by the form and structure of its pincers.

2. *Atergates frontalis* de Haan.

Fauna Japon: Crustacea, tab. XIV, fig. 3. Alph. Milne Edwards, Nouv. Arch. du Mus. I, p. 238.

Of this species the carapace alone has been described by de Haan. The Leyden Museum is now however in the possession of a wholly entire specimen of an *Atergates*, collected at Amoy, which undoubtedly belongs to *Aterg. frontalis* de H. This species may be distinguished at once from *Aterg. integerrimus* Lam., that lives also in the Japanese seas, by the structure of the upper surface of the carapace and the legs. The carapace of *Aterg. integerrimus* being almost everywhere smooth, at least on its anterior half, it is in *Aterg. frontalis* de H. very rugose and furrowed by the very deep interregional grooves that are not found in *A. integerrimus*, and also by numerous depressions and punctate rugosities.

These rugosities are also observed on the outer surface of the legs, especially on the claws of the chelipedes, which are smooth in the other species. In both species the legs are ornamented with equally developed crests. The middle lobes of the front project more in *A. frontalis* de H. than in *Aterg. integerrimus* Lam.

It being now very easy to distinguish these two species, it will cause more difficulties to expose the differences between our species and the *Aterg. reticulatus* de H. The innumerable rugosities on the upper surface of the carapace are very distinctly reticulate in the latter species, but they are arranged very irregularly in *Aterg. frontalis*, and the crests of the legs of the latter species are sharper than in *Aterg. reticulatus* de H.

Breadth of the carapace of *Aterg. frontalis* de H. 82 mm.
Length » » » 50 mm.

3. *Eurycarcinus integrifrons* n. sp.

Having had no occasion to compare the description of *Eurycarcinus* (*Galene*) *Hawahensis* Dana, it is possible that the new species which I am going to describe, belongs to that *Euryc. Hawahensis.* In this case the *Euryc. integrifrons* should disappear from science.

Eurycarcinus integrifrons mihi is closely allied to *Euryc. Grandidieri* Alph. M. Edw., but it may be distinguished at once by the shape of its front, of which the margin is straight, entire and not incised.

Carapace as convex as in *Euryc. Grandidieri* Alph. M. Edw., but comparatively not so broad as in this species. Its upper surface is wholly smooth, the interregional furrows are wanting entirely, and it is only by means of an ordinary lens that the same very minute granules can be observed, which are also found in the Zanzibar species. Latero-anterior margin short, divided by three small incisions into four lobes, the two anterior of which are of equal size and much larger than the two posterior that have a more dentiform shape, though projecting much less than in *Euryc. Grandidieri* or in *Euryc. Natalensis* Krauss. The supero-external angle of the orbits is sharper and projects more than in *E. Grandidieri* Alph. M. Edw.; the infra-orbital margin is locally thickened. The external maxillipedes and the abdomen constitued by 7 somites, have the same shape as in *Euryc. Grandidieri* Alph. M. Edw.

The latero-anterior margins and the inflected portion of the carapace are covered with short hairs.

The chelipedes are unequal in size, both in males and females, but entirely smooth; the meropodites are covered by the carapace, the carpopodites furnished with an acute tooth at the inner edge, and, as also the claws, wholly resembling those of *Euryc. Grandidieri* Alph. M. Edw. The carpopodites and propodites of the ambulatory legs covered in the same manner with a few long hairs as in the other species.

The collection of the Leyden Museum contains several specimens of this crustacean, but it is unknown where they have been collected; probably, however, they originate from the Indian seas.

Breadth	of the carapace	of the male	20 m.m.
Length	»	»	14 m.m.
Breadth	»	of the female	22 m.m.
Length	»	»	16 m.m.

It may be allowed to observe that the genus *Eucrate* de Haan is nearly allied to the genus *Eurycarcinus*.

4. *Ozius granulosus* n. sp.

This species greatly resembles the well-known *Ozius tuberculosus* M. Edw., for it has the same outer shape and appearance.

Upper surface of the carapace rather convex as in *Ozius tuberculosus* M. Edw.; the antero-lateral margins are very arched, longer than the postero-lateral ones (in *tuberculosus* M. Edw. they are shorter), and divided into five triangular and acute teeth, besides the supero-external angle of the orbits.

The posterior tooth is smaller than the four preceding which resemble each other in shape; they are furnished with acute margins and distinctly separated from the inflected portion of the carapace, which is not the case in *Ozius tuberculosus* M. Edw. The anterior half of the upper surface of the carapace is divided by profoundly deep interregional grooves into several lobes which are covered and ornamented with coarse granular rugosities, the very broad grooves being quite smooth. The posterior half of the carapace is devoid of furrows, but is very minutely granulated. Front bimarginate and divided by three shallow bays into four little rather prominent teeth: in *Ozius tuberculosus* M. Edw. on the contrary four long granulated teeth are observed, of which the middle two are larger than the lateral ones. Inferior part of the carapace a little granulated near the orbits and the mouth. The chelipedes are unequal, the meropodites covered by the carapace, the carpopodites and the claws very granulated quite as in *Ozius tuberculosus* M. Edw. The ambulatory legs almost wholly smooth, but a little rugose on the upper margins. Abdomen having the same shape as in the *O. tuberculosus* M. Edw.

But a single female has been collected in the bay of Gorontalo, Celebes.

Breadth	of the carapace	28 m.m.
Length	» »	18 m.m.

This interesting species may be distinguished from the *Ozius tuberculosus* M. Edw. by the shape of the front and of the antero-lateral margins. The *Ozius rugulosus*, and the *O. guttatus* are more different species.

5. *Epixanthus dilatatus* n. sp.

The carapace is almost twice as broad as long, much more convex than in *Epixanthus frontalis* M. Edw. The antero-lateral margins are very oblique, as long as the postero-lateral margins, and ornamented with 5 depressed teeth, besides the supero-external angle of the orbit. The two anterior teeth, especially the second, broad and blunt, the three posterior more triangular and acute, the last tooth being the smallest. There are no interregional grooves, and the various regions are very indistinct.

Front bimarginate, deflexed, divided into four lobes, the two middle lobes being rounded and broader than the two lateral ones. The anterior half and the lateral regions of the carapace are somewhat rugose by a few transverse rugosities and covered with a few short stiff hairs; in the same manner the inflected portion of the carapace is granulated and hairy.

The chelipedes are very unequal, both in the male and female, especially in the former, but greatly resemble those of *Epix. frontalis* M. Edw. External surface of the carpopodites and of the claws minutely granular and covered with short hairs, the carpopodite being armed at its inner edge with two dentiform processes.

The dactylopodite and the immoveable finger are very slender and elongate, especially in the smaller claw, and armed each with six or seven triangular teeth.

The dactylopodite of the larger claw armed with a large tooth at its base quite as in *Epix. frontalis* Edw. Ambulatory legs thickly covered with short hairs.

There are two specimens, a male and a female in the collection of the Museum, collected by Kuhl and van Hasselt at the island of Java.

Breadth of carapace of the male	40 m.m.
Length » »	24 m.m.
Breadth » of the female	54 m.m.
Length » »	31 m.m.

Epixanthus dilatatus may be distinguished from *Epix. frontalis* M. Edw. by its more convex carapace and its antero-lateral margins being divided into five teeth.

6. *Goniosoma sexdentatum* Herbst.

Herbst, Krabben und Krebse, pl. VII, fig. 52. Alph. Milne Edwards, Arch. du Mus. X, p. 372.

The Leyden Museum is in possession of two beautiful males of this species, collected at the island of Amboina.

Breadth of the carapace of the larger specimen	97 m.m.
Length » »	66 m.m.

This species is closely allied to and has quite the facies of *Goniosoma natator* Herbst, which lives in the same seas, but it may be distinguished by the following characters:

The six teeth of the antero-lateral margin are altogether spiniform with a black point, except the second tooth which has an uncolored point. The last or sixth tooth is not larger in adult specimens than the other but is quite similar to them. There are no granular ridges on the upper surface of the carapace behind the long granulated line which unites the two posterior teeth of the lateral margins; this line itself has a much more sinuous course in our species than in *Gon. natator* Herbst, the carapace of which is ornamented with a twice interrupted ridge behind the said line. In *Gon. natator* Herbst on the contrary, the two anterior teeth of the lateral margins are blunt and truncated; nor is the third tooth, the largest of all, acute, but the three posterior ones alone are spiniform, and the last tooth is smaller than the other ones. The meropodites and carpopodites of the three anterior ambulatory legs and the meropodites of the posterior legs are somewhat more slender in *Gon. sexdentatum* Herbst than in the other species. But for the rest these two species resemble each other completely and no other differences exist.

7. *Goniosoma dubium* Hoffmann.

Hoffmann, Crustacés de Madagascar, p. 11, pl. II.

The Leyden Museum has also received three younger specimens, two males and one female collected at the island of Timor, of this species which is undoubtedly nearly allied to *Gonios. orientale* Dana. They completely resemble the typical specimens described by Hoffmann and which are natives of Réunion. The first tooth of the anterolateral margin is as large as the fourth and the fifth and much larger than the second tooth which is rudimentary. It may be observed that one specimen of Timor is provided with eggs, the breadth of its carapace being still only 31 m.m., whereas the typical specimen is much larger.

8. *Goniosoma acutifrons* n. sp.

Nearly allied to *Gonios. dubium* Hoffm. The carapace somewhat more convex, entirely covered with short small hairs and ornamented with the ordinary smooth and little granulated transverse ridges. Frontal teeth very characteristic, eight in number, altogether depressed, triangular, with arched outlines and very sharply pointed; the four middle teeth are of the same size and their interstices are as large as the space between the second and the third pair; the teeth of this third pair are a little larger and are separated from the intraorbital teeth by a somewhat greater space than from the teeth of the second pair. The anterolateral margins armed with six teeth, the second being extremely rudimentary and scarcely perceptible, still more rudimentary than in *Gonios. dubium* Hoffm. The first tooth has the same size and shape as the four posterior ones.

The basal joint of the external antennae ornamented with two pointed spines. The chelipedes are stout; the anterior margin of the meropodites armed with three spines, the interspace of the two distal spines being smaller than the space between the two posterior ones. The carpopodites have four spines, one very stout spine on their inner angle and three on the external surface. The chelae armed with five spines, two on the internal and three on the external edge of the upper surface. Ambulatory legs slender; the meropodites of the posterior legs more slender than in *Gonios. dubium* Hoffm., with a ridge on their outer surfaces and the distal end of the inferior margin armed with a spine; the penultimate joints ornamented with many minute teeth on the inferior edge, the dactylopodites oval and elongate. The abdomen of the male having the same shape as in *Gon. dubium* Hoffm.

Breadth of the carapace of the single specimen 30 m.m.
Length » » 21 m.m.

We have received but a single male of this very characteristic species, which may at once be distinguished by the shape of its frontal and antero-lateral teeth.

9. *Paratelphusa tridentata* M. Edw. *and two new species of this genus.*

I have found in the carcinological collection of the Leyden Museum four labelled specimens of *Paratelphusa*: 1°. a *Paratelphusa*, from the Cape of Good Hope, bearing the name of *Telphusa senex* Fabr., 2°. a *Paratelphusa* from Java under the name of *Telphusa tridens* Fabr., 3°. another *Paratelphusa* with the name of *Telphusa triodon* de Haan and 4°. a fourth *Paratelphusa* also from Java with the name of *Telphusa convexa* de Haan. These four specimens are the numbers 147, 151, 152 and 153 of the catalogue of the crustacea of the Leyden Museum, published by Herklots in 1861 under the name of Symbolae Carcinologicae. [1])

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[1]) Herklots, Symbolae Carcinologicae, Etudes sur la classe des Crustacés, Leyde, 1861.

A close examination has led me to the conclusion that the first three enumerated *Paratelphusae* belong altogether to the *same* species, to the *Paratelphusa tridentata* M. Edw., which name has the priority, though the names, given by de Haan, are of older date, 1°. because it appears that three different names have been applied by de Haan to three specimens of the same species, *which fact is quite inexplicable*, and 2°. because these species have never been described by our eminent carcinologist. The fourth specimen, on the contrary, to which de Haan has given the name of *Telphusa convexa*, belongs really to a new species, which I am now going to describe. I intend, moreover, to describe a second new species from Sumatra, that has been collected by Mr. Snelleman during the recent expedition to the interior of this island.

The *Paratelphusa tridentata* M. Edw. may be characterized in this manner:

Antero-lateral margins of the somewhat depressed carapace with two epibranchial teeth, the posterior of which is directed straightly backwards and passes not inwards on to the carapace. The post-frontal crest ends nearly at the middle of the anterior epibranchial tooth. An imaginary line, uniting the posterior epibranchial teeth, is situated much nearer to the post-frontal crest than to the transverse furrow on the middle of the carapace. The suborbital margin having a regularly arched course without an obtuse angle. The meropodal joints of all the legs without a sharp spine at the distal end.

This species may therefore at once be distinguished from the *Paratelphusa maculata* mihi and from the *Paratelphusa convexa* de Haan by the want of the sharp spines at the distal end of the meropodites. It differs more especially from *Paratelphusa convexa* de Haan by quite a different facies, by its depressed carapace, comparatively shorter antero-lateral margins, by its more slender legs etc.; and it differs from the *Paratelphusa maculata* mihi moreover by its shorter and otherwise shaped antero-lateral margins and by the course of the post-frontal crest.

We have received the *Parat. tridentata* M. Edw. from Java, Timor, the Bavian-Islands, the Solor-Islands and, when the label speaks truth, also from the Cape of Good Hope. All these specimens resemble each other completely except those of the Bavian-Islands, where the two epibranchial teeth are more faintly marked.

A fine female of the Solor-Islands measures:

Breadth of the carapace		70 m. m.
Length	»	52 m. m.

The largest specimen, a male, of the Bavian-Islands measures:

Breadth of the carapace		58 m. m.
Length	»	42 m. m.

One of the specimens from Java, a female, measures:

Breadth of the carapace		37 m. m.
Length	»	29 m. m.

10. *Paratelphusa convexa* de Haan.

Antero-lateral margins of the convex carapace armed with two epibranchial teeth, the latter of which passes backwards and inwards on to the carapace with a distinct keel. The post-frontal crest ends before the middle of the base of the anterior epibranchial tooth. The imaginary line that unites the two last epibranchial teeth, is situated almost in the middle between the postfrontal crest and the transverse furrow on the middle of the carapace. The suborbital margin passing with a more or less obtuse angle to the extra-orbital tooth. The meropodal joints of all the legs armed with a sharp spine.

This species has a physiognomy greatly differing from *Paratelphusa tridentata* M. Edw., with which is appears to have been confounded by Heller, von Martens and Wood-Mason. 1) Its carapace is more convex, the antero-

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1) Wood-Mason, Conspectus of the species of *Paratelphusa*, in Magazine of Natural History, XVII, 1876, p. 121.

lateral margins comparatively longer, the ambulatory legs are more slender, and armed with a spine at the distal end of the meropodites. We have received specimens of this species from Java, Timor, and New-Guinea, which completely resemble each other.

Breadth of the carapace 41 m. m.
Length of the » 30 m. m.

11. *Paratelphusa maculata* n. sp.

Antero-lateral margins of the more or less depressed carapace armed with two epibranchial teeth, the latter of which is directed straightly backwards and does not pass inwards on to the carapace. The post-frontal crest ends at the anterior part of the base of the first epibranchial tooth, and the distance of the extra-orbital angle to the first epibranchial tooth is greater than the space between the two epibranchial teeth, whereas in *Paratelph. tridentata* M. Edw. that distance is equal to or smaller than the interspace of the epibranchial teeth. The imaginary line which unites the two epibranchial teeth passes almost quite at equal distances from the postfrontal crest and the transverse furrow of the middle of the carapace. The suborbital margin has a regularly arched course without an obtuse angle. Meropodal joints of all the legs armed with a sharp spine at the distal end. The surface of the carapace and of the legs are ornamented with numerous small obscure spots.

Breadth of the carapace of the largest specimen (♀) 37 m. m.
Length » » 29 m. m.

Six specimens, males and females, have been collected in the river of Silago in the interior of the island of Sumatra by the zealous naturalist Snelleman.

This species may be distinguished from the *Paratelphusa tridentata* M. Edw., which it resembles more than the *Paratelphusa convexa* de Haan, by the longer and otherwise shaped antero-lâteral margins and by the spines of the meropodal joints.

It may be allowed to add that the Museum is also in the possession of a *Paratelphusa* from the island of Banka, which resembles almost completely the true *Paratelph. tridentata* M. Edw., but the carapace is a little more convex and the meropodal joints have only rudimentary spines. Perhaps this variety may be peculiar to that island.

12. *Limnocarcinus intermedius* n. gen. n. sp.

Limnocarcinus [1]: New genus of the family of *Gecarcinidae*, and more particularly of the subfamily of the *Gecarcininae* Wood-Mason. Front not united to the internal suborbital lobes, quite as is the case in *Hylaeocarcinus* Wood-Mason; the flagella of the antennae projecting into the interspaces between the front and the internal suborbital lobes. The third joint of the external maxillipeds with an obtuse-angled emargination in its anterior border; the three terminal joints however fully visible externally when the manillipeds are properly closed, the manillipeds having quite the same shape and form as in *Pelocarcinus Lalandei* M. Edw.

Limnocarcinus evidently presents a remarkable transition from *Pelocarcinus* M. Edw. to *Hylaeocarcinus* Wood-Mason, quite as the latter genus is intermediate between *Pelocarcinus* and *Gecarcinus*.

The species which we will call *Limnocarcinus intermedius*, is most closely allied to *Hylaeocarcinus Humei* Wood-Mason of the Nicobar-Islands, and bears a striking resemblance to it, so that it may suffice to describe only the differences and to state the measures.

Firstly the tubercles on the mesogastric lobe are scarcely perceptible in our species, which are very distinct in *Hyl. Humei*. Then the fissures separating the two suborbital

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1) From *λίμνη*, a moor and *καρκίνος*, crab.

lobes are much wider than in the other species and are two or three times as wide as the spaces which separate the internal suborbital lobes from the front. Lastly the external maxillipeds resemble completely those of *Pelocarcinus Lalandei* M. Edw. For the rest this landcrab presents all the peculiarities in organisation, colours and outlines of the carapace and of the legs described in *Hylaeoc. Humei* W. Mas.; therefore the other differences that may exist, will be found only by a comparison of the specimens itselves.

Breadth of carapace of the male			67 m. m.
Length	»	»	50 m. m.
Length of the right claw of the male			59 m. m.
» left	»	»	57 m. m.

Hab. The single specimen that we have received, a male, has been collected near the bay of Gorontalo at the island of Celebes, probably in the forests or in the moors of that locality. *Hylaeocarcinus Humei* lives in the Nicobar Islands, *Pelocarcinus Lalandei* M. Edw. is a native of the New World.

13. *Macrophthalmus Polleni* Hoffmann.

Hoffmann, Crustacés de Madagascar, p. 19, pl. IV.

It seems to me very probable that this species be identical to *Macropht. Latreillii* Milne Edw. (Nouv. Arch du Mus. t. IX, p. 278, pl. 13, fig. 3). I cannot find any differences, but the question must remain undecided, because we have no typical specimen of *Macr. Latreillii* M. Edw.

14. *Gelasimus perlatus* Herklots.

Herklots, Addit. ad Faun. Afr. Occ. p. 6. Milne Edwards, Ann. Scienc. Nat. 1852, p. 151.

This species is positively closely allied, perhaps even identical to *Gel. Tangeri* Eydoux (Mag. de Zool. de Guérin, 1835, pl. 17). Herklots was merely in the possession of a single adult male whose larger claw is but a little longer than the carapace; we received afterwards however many adult specimens from the same locality, the coast of Guinea, in which the larger claw is greatly longer, quite as long as in *Gel. Tangeri*; these specimens have for the rest a striking resemblance to the male which has been described by Mr. Herklots and is still found in the collection. But this question also remains undecided, because we have no typical specimen of *Gel. Tangeri.*

15. *Malacosoma reticulatum* n. g. n. sp.

Malacosoma, a new genus of the family of *Pinnotheridae.* It has the characteristic physiognomy of *Pinnotheres*, but it differs by the structure of the external maxillipeds. The second joint (ischiognathite Milne Edw.) is rectangular and but a little longer than broad, the third joint (merognathite M. Edw.) is quadrangular, shorter than the second, and the terminal joints are affixed to its internal angle. The internal margins of the second and third joints of the external maxillipeds are straight, and consequently the two maxillipeds are lying close to each other. The exopodites (exognathe M. Edw.) of these outer foot-jaws are stout and almost half as broad as the third joint. The integument is as weak as in *Pinnotheres*, and therefore it is possible that *Malacosoma* has also the same manner of life as the crustaceans belonging to the group of *Pinnotheres.*

Malacosoma reticulatum has a high and thick carapace; it is smooth, broader than in *Pinnotheres;* the antero-lateral margins arched and entire, and the postero-lateral ones somewhat impressed; front very deflexed, projecting, triangular with an arched anterior border; the orbits and the eyes are very small, as in *Pinnotheres.* The abdomen of the female, constituted by 7 segments, is very large, as in *Pinnotheres.* The whole upper surface and the inflexed portions of the carapace are ornamented with symmetrical dark and anastomosing lines which border large mashes and cause a reticulate figure. The chelipedes have perished in the single specimen we have received, the posterior ambulatory legs however are short, not slender and are also ornamented with dark lines.

Breadth of carapace (of the female)	24 m. m.
Length »	20 m. m.
The space between the orbits measures	9 m. m.

This interesting species has been collected by Mr. Hoedt at Amboina.

16. *Grapsus Pelii* Herklots.

Herklots. Addit. ad Faun. Afr. p. 8. Milne Edwards, Ann. Scienc. Nat. t. XX, 1853, p. 166.

This species is identical with *Goniopsis cruentatus* Latr. I have been led to this conclusion by comparing *Grapsus Pelii* with some typical specimens of *Goniopsis cruentatus*, which we received from Mr. Alph. Milne Edwards and which have been collected in Mexico.

17. *Grapsus dilatatus* de Haan.

Mus. Lugd. in coll. Herklots. Symbolae Carcinol, p. 16.

This species is identical with *Metopograpsus pictus* Alph. Milne Edwards (Nouv. Arch. du Mus. t. IX, p. 289, pl. III, fig. 2). The name given by de Haan must disappear from science, never having been published. The specimen that bore the name of *Gr. dilatatus* de H., was collected at Timor by Macklot.

18. *Grapsus simplex* Herklots.

Herklots, l. c. pag. 9. Milne Edwards, Ann. Sc. Nat. 1853, p. 170.

On account of the relation of the antennae to the orbits, and of the shape of the external maxillipeds, this species really belongs to the genus *Grapsus* M. Edw.

19. *Sesarma elegans* Herklots.

Herklots, l. c. pag. 10. Milne Edwards, op. cit. p. 187.

This species presents some resemblance to *Aratus Pisonii* M. Edw., but the seventh somite of the abdomen of the female is included by the sixth, as in the true *Sesarmae*, so that this species may not be ranged in the genus Aratus. It may be distinguished at once from *Aratus Pisonii* M. Edw. by a less elongated carapace and by the more slender legs.

20. *Grapsus pusillus* de Haan.

Fauna Japon: p. 59, pl. XVI, fig. 2. Milne Edwards, Ann. Scienc. Nat. p. 175.

This species, which belongs to the genus *Nautilograpsus* M. Edw., is undoubtedly different from *Nautilogr. minutus* M. Edw., which inhabits the Atlantic and the Indian Oceans; it appears to may be distinguished chiefly by the carapace being more narrowed at its posterior half, and by the more slender and longer dactylopodites of the ambulatory legs. The typical specimens of this species however are no more present in the Leyden Museum; some specimens which I have found in that collection, and which bore the name of *Grapsus pusillus* de Haan, having been collected even at Japan according to the label, completely resemble the specimens of *N. minutus* M. Edw. from the Atlantic Ocean. How to explain this fact? The Leyden collection is in the possession of specimens of *Nautil. minutus* M. Edw. from the Atlantic Ocean and from New-Guinea, which present no differences at all. According to Mr. de Haan *Nautilogr. pusillus* de H. is also found in Mexico.

21. *Gnathograpsus intermedius* n. sp.

Closely allied to *Gnathograpsus Riedelii* Alph. M. Edw., this species presents also some resemblance to *Gnathograpsus pilipes* Alph. M. Edw.

As to the outlines of the carapace, the relative breadth of the front and the course of the lateral margins, our species completely resembles *Gnath. pilipes* Alph. M. Edw., but the carapace is very depressed and not ornamented with other furrows except the transverse groove on the middle, and the three teeth of the antero-lateral margins project as little as in *Gnath. Riedelii.* On the contrary our species is quite similar to *Gnath. Riedelii* as regards the structure of the region of the antennae, the shape of the orbits and of the epistoma. Pleural regions of the inflexed portion of the carapace are smooth. The outer jaws too have the same shape as in Gnath. Riedelii, but the exopodite (exognathe Alph. M. Edw.) is not longer than the third joint but as long or even somewhat shorter. Chelipedes and legs as in *Gnath. pilipes*, the margins of the two last joints of the ambulatory legs being ornamented with as long hairs, but the outer surface of the claws is granulated.

Breadth of the carapace of the male	27	m. m.
Length » »	23	m. m.

We are in the possession of two males collected in the Moluccas by Macklot.

22. *Heterograpsus sanguineus* de Haan.

Fauna Japon: p. 58, tab. XVI, fig. 3. Milne Edwards, Ann. Scienc. Nat. 1853, p. 193.

The carcinological collection of the Museum is in the possession of five specimens of this species from Amoy in China.

Breadth of the carapace of the	largest male	44	m. m.
Length	»	»	37	m. m.
Breadth	»	smallest male	24	m. m.
Length	»	»	21	m. m.

The male which was unknown to de Haan, has much greater claws than the female; they are equal in size, or the right claw is larger in some individuals. The inner angle of the carpopodite is armed with a short sharp spine as in the female. The outer surface of the claw a little convex without a keel which is found in the female. The dactylopodites and the immoveable fingers of the chelipedes are provided with short blunt teeth and at the end excavated like a spoon.

We have also received two typical specimens of *Heterograpsus sexdentatus* M. Edwards from Mr. Alph. Milne Edwards, collected in New-Zealand, and so I am enabled to state the differences of this species and of the *Heterogr. sanguineus* de Haan. Firstly the suborbital margin is provided in *H. sexdentatus* M. Edw. with a row of large rounded granules, in *H. sanguineus* on the contrary it is incised or crenulated only extremely subtilly and superficially; then the carpopodite of the chelipedes has a blunt inner angle in *H. sexdentatus*, without a spine, in *H. sanguineus* on the contrary with a sharp spine, and lastly the claws of the chelipedes are furrowed in *H. sexdentatus*, but for the rest quite smooth without bristles; in *H. sanguineus* they are provided with some rows of short but stout dark bristles. The last somite of the abdomen of the female is rounded in *H. sanguineus* but is triangular in *H. sexdentatus*. The specimens described by Heller (Novara-Reise, p. 52) as belonging to *Heter. sanguineus* de H., belong positively to *H. sexdentatus* M. Edw. *H. sanguineus* de H. inhabites the seas north of the Equator, but *H. sexdentatus* M. Edw. lives south of this line.

23. *Heterograpsus penicillatus* de Haan.

Grapsus, *Eriocheir*, *penicillatus* de Haan, Fauna Jap. p. 60, pl. 11, fig. 6. Milne Edwards, Ann. Scienc. Nat. p. 177.

This species belongs also to the genus *Heterograpsus* M. Edw. and is even closely allied to *H. sanguineus* de Haan. The males of both species may be distinguished at once by the thick clothing of coarse hairs on the claws, but it is more difficult to distinguish the females. The infraorbital margin which is very thin and minutely crenulated passes without an interruption, but has quite another appearance in *H. penicillatus*: in this species it is interrupted near the extraorbital angle and proceeds again after that interruption; on both sides of that interruption this margin is thickened locally. *Heterogr. penicillatus* de H. is also nearly allied to *Heterogr. barbimanus* Heller (Novara-Reise, p. 53, tab. IV, fig. 5), but this last species has a more narrow front.

24. *Hypsilograpsus Deldeni* n. g. n. sp.

This crustacean has its external maxillipeds quite similar to those of the genus *Gnathograpsus* Alph. M. Edw., but it may be distinguished by the very thick body, the very convex carapace and the very deflexed front. By these differences it has too different a physiognomy from *Gnathograpsus* to be ranged in the latter genus.

The carapace very thick, convex, having a square shape with rounded angles and with but little arched lateral margins; its upper surface is everywhere granulated, especially on the anterior and lateral regions, and also covered with a few very minute short hairs. The interregional grooves are very distinct and deep, the transverse middle furrow making at its ends with the longitudinal grooves a figure almost like an H. The carapace is much deflexed anteriorly, the front is a little less broad than half the breadth of the carapace and is bayed three times, in the middle and at the sides, so that its border is sinuous. The antero-lateral margins are armed with three very distinct teeth; the margins of these teeth like those of the front and of the orbits are ornamented with granulations. The postero-lateral margins are somewhat longer than the antero-lateral ones and indicated by a granular line. The external maxillipeds are shaped in the same manner as in *Gnathograpsus pilipes* Alph. Milne Edw., the exopodite (exognathe Alph. M. Edw.) reaches to the anterior border of the very auriculated third joint of the outer foot-jaws, is very convex and almost as broad as the second joint. The legs are short; the chelipedes (of the female) are equal and of a tolerable size; the meropodite does not proceed beyond the lateral margins of the carapace and is not armed with spines; the carpopodite has also no spines and is granulated at its outer surface; claw a little convex, the fingers excavated like a spoon; the inner surface of the claws is smooth, the outer surface covered with some granules and short hairs and with two granulated lines, the inferior of which passes on the outer surface of the immoveable finger. The second and third pair of the ambulatory legs are the longest of all, but are scarcely as long as the breadth of the carapace; the joints are but little compressed, the inferior margin of the meropodites is armed a little before the distal end with two or three teeth, of which one is somewhat larger than the other; the carpopodites and the propodites are but a little hairy and the dactylopodites that are similar to those of *Gnathograpsus*, are provided with rows of short bristles.

Breadth of the carapace of the female			22 m. m.
Length	»	»	18 m. m.

The single specimen, a female, has been presented to our Museum in 1836 by Mr. van Delden, to whom we dedicate it, and is collected near Menado at the island of Celebes.